What is claimed is:

1. An isolated CD44 fragment, which fragment comprises the amino acid sequence of a fragment formed in a $CD44^+$ cell in the presence of extracellular hyaluronan and of intracellular γ-secretase and metalloprotease.

2. The fragment of claim 1, wherein the fragment formed in the $CD44^+$ cell is a cleavage product of γ-secretase.

3. A polypeptide comprising the CD44 fragment of claim 1, wherein at least one amino acid residue thereof is an amino acid derivative.

4. A composition comprising the CD44 fragment of claim 1 and a pharmaceutically acceptable carrier.

5. The composition of claim 4, wherein the carrier is a 16 amino acid polypeptide of the Antennapedia protein of the *Drosophila* fruit fly.

6. An antibody which specifically binds to the CD44 fragment of claim 1.

7. The antibody of claim 6, wherein the antibody is labeled with a detectable moiety.

8. The antibody of claim 7, wherein the detectible moiety is a radioisotope, an enzyme, a fluorogenic material, a chemiluminescent material or an electrochemical material.

9. A method for determining whether an agent increases the amount of CD44 fragment formed in a $CD44^+$ cell, which comprises the steps of

(a) contacting the $CD44^+$ cell with the agent;

(b) determining the amount of γ-secretase-generated CD44 fragment present in the $CD44^+$ cell; and

(c) comparing the amount of CD44 fragment determined in step (b) with the amount of CD44 fragment present in a $CD44^+$ cell not contacted with the agent, a greater amount of CD44 fragment in the cell contacted with the agent indicating that the agent increases the amount of CD44 fragment formed.

10. A method for determining whether an agent increases the amount of CD44 fragment formed in a $CD44^+$ cell, which comprises the steps of

(a) contacting the agent with a $CD44^+$ membrane fragment in the presence of hyaluronan, γ-secretase and metalloproteinase;

(b) determining the amount of CD44 fragment formed in step (a); and

(c) comparing the amount of CD44 fragment determined in step (b) with the amount of CD44 fragment formed in the absence of the agent, a greater amount of CD44 fragment formed in the presence of the agent indicating that the agent increases the amount of CD44 fragment formed.

11. A method for increasing the amount of CD44 fragment formed in a $CD44^+$ cell, which method comprises introducing into the cell γ-secretase and/or a γ-secretase agonist.

12. A method for determining the amount of CD44 fragment in a sample, which method comprises contacting the sample with the antibody of claim 6 under conditions permitting the formation of a complex between the antibody and the CD44 fragment, and determining the amount of complex so formed, thereby determining the amount of CD44 fragment

in the sample.

13. The method of claim 12, wherein the sample comprises a $CD44^+$ cell.

14. The method of claim 11 or 13, wherein the cell is a mammalian cell.

15. The method of claim 14, wherein the cell is a human cell.

16. A method for treating a subject afflicted with a CD44-associated disorder comprising administering to the subject a therapeutically effective amount of γ-secretase or a γ-secretase agonist, thereby treating the subject.

17. A method for treating a subject afflicted with a CD44-associated disorder comprising administering to the subject a therapeutically effective amount of the CD44 fragment of claim 1, thereby treating the subject.

18. The method of claim 16 or 17, wherein the CD44-associated disorder is cancer.

19. The method of claims 16 or 17, wherein the CD44-associated disorder is streptococcal invasion.

20. An article of manufacture comprising a packaging material having therein the CD44 fragment of claim 1, and a label indicating a use for the CD44 fragment in treating a CD44-associated disorder.

21. The article of claim 20, wherein the CD44-associated disorder is cancer.

22. The article of claim 20, wherein the CD44-associated disorder is streptococcal invasion.